

Claims

1. A method comprising:
generating a print job having a plurality of blocks of data at least two of the plurality of blocks of data including a different type of data; and
indicating a type of data in a header portion in at least one of the plurality of blocks of data.
2. The method of claim 1 further comprising indicating a length of the block in the header portion.
3. The method of claim 1 further comprising indicating a length of a data portion in the header portion.
4. The method of claim 1 further comprising adding a data integrity portion to detect an error in a data portion of the block.
5. The method of claim 1 further comprising adding a data integrity portion to detect an error and to correct an error in a data portion of the block.
6. The method of claim 1 wherein generating a print job includes encoding program control language.
7. A print job data communication system comprising:
a data structure communicating a print job, the structure contained in a memory and comprising a plurality of blocks,
a first block including:
a header including a first identifier for a first language;
a first portion of data in the first language; and
a second block including:

a header including a second identifier for a second language;
and

a second portion of data in the second language; and
a processor including a program parsing the first portion of data from
the first block and the second portion of data from the second block.

8. The print job data communication system of claim 7 further comprising a
third block including:

a header including a third identifier for a third language; and
a third portion of data in the third language.

9. The print job data communication system of claim 7 wherein one of the first
language and the second language is a page description language.

10. The print job data communication system of claim 9 wherein the other of the
first language and the second language is a printer job language.

11. The print job data communication system of claim 7 wherein the first data
portion and the second data portion are assembled to form at least one print
command controlling a printer.

12. The print job data communication system of claim 7 wherein the first data
portion and the second data portion are assembled to form a print command
controlling placements of objects on a printer page.

13. The print job data communication system of claim 7 wherein the first block
and the second block each have a data integrity portion.

14. The print job data communication system of claim 13 wherein the data
integrity portion of each block is a check sum.

15. The print job data communication system of claim 13 wherein the data integrity portion of each block includes an error detection portion.
16. The print job data communication system of claim 15 wherein the data integrity portion of each block includes an error correction portion.
17. A printing apparatus comprising:
a processor;
a storage device; and
software, embodied in the storage device, operable on the processor to:
 identify a first group of blocks in a print job;
 extract data from the first group of blocks; and
 identify a second group of blocks in the print job;
 extract data from the second group of blocks; and
 assemble the data from the first and second groups into print commands.
18. The printing apparatus of claim 17 wherein the software identifies a first block type by reading a header in at least one of the first group of blocks, the header including information identifying the first group of blocks.
19. The printing apparatus of claim 18 wherein the software identifies the second block type by reading a header in at least one of the second group of blocks, the header including information for identifying the second group of blocks.
20. The printing apparatus of claim 17 wherein extracting the data of one of the first group of blocks and the second group of blocks includes extracting page definition language.

21. The printing apparatus of claim 17 wherein extracting the data of the one of the first group of blocks and the second group of blocks includes extracting printer job language.
22. The printing apparatus of claim 17 wherein extracting the data of the one of the first group of blocks and the second group of blocks includes extracting a graphic data compression mode.
23. The printing apparatus of claim 17 wherein extracting the data of the one of the first group of blocks and the second group of blocks includes extracting bit level encoding.
24. The printing apparatus of claim 17 wherein the software operable on the processor further operates on the first group of blocks and the second group of blocks to check data integrity of blocks within the groups.
25. A data structure, embodied in a computer-readable medium, for a print job comprising:
- a first block including:
 - a header; and
 - a data portion, the header of the first block including an identifier of a type of data in the first block; and
 - a second block including:
 - a header;
 - a data portion, the header of the second block including an identifier of a type of data in the second block.
26. The data structure of claim 25 wherein the first block further comprises a data integrity portion.

27. The data structure of claim 25 wherein the second block further comprises a data integrity portion.
28. The data structure of claim 25 wherein the type of data in the first block and the type of data in the second block are the same.
29. The data structure of claim 28 further comprising a third block further comprising:
- a header; and
 - a data portion, the header of the third block including an identifier of a type of data of the third block.
30. The data structure of claim 29 wherein the third block further comprises a data integrity portion.
31. The data structure of claim 29 wherein the type of data in the third block is different than the type of data in the first block and the second block.
32. The data structure of claim 28 wherein the data portion of the first type of block and the data portion of the second type of block has a fixed length.
33. The data structure of claim 28 wherein the data portion of the first type of block and the data portion of the second type of block has a variable length.
34. The data structure of claim 33 wherein the identifier portion of at least one of the first type of block or the second type indicates the length of the block.
35. The data structure of claim 25 wherein the type of data in the first block is different than the type of data in the second block.

36. A method of reading a print job comprising:
reading an indicator in a first header portion of a first block of the print job of a first encoding type; and
decoding the information in the first block using a decoder for the first encoding type.
37. The method of claim 36 further comprising reading an indicator in a second header portion of a second block of information in the print job of a second encoding type.
38. The method of claim 37 further comprising decoding the information in the second block using a decoder for the second encoding type.
39. The method of claim 36 further comprising printing the print job that includes decoded information from the first block.
40. The method of claim 38 further comprising printing the print job that includes decoded information from the first block and decoded information from the second block.
41. A printing device comprising:
means for reading an indicator in a first header portion of a first block of the print job of a first encoding type; and
means for decoding information from a second portion of the first block using the first encoding type.
42. The printing device of claim 41 further comprising:
means for reading an indicator in a first portion of a second block of the print job of a second encoding type; and

means for decoding information from a second portion of the second block using the second encoding type.